USING QUINSTAR IN 2011

The EPA has granted the use of QuinStar (quinclorac) 4L and 75DF for the control of dodder under a Section 18 Emergency Exemption Use permit. You must have a Section 18 label in hand if you are using this herbicide. You can get a label from the Cranberry Station or at your point of purchase.

**Handler Acceptance of Treated Fruit.** Since the maximum residue limits (MRL) for quinclorac varies for different segments of the export market, handlers are permitting the use of QuinStar in 2011 in different fashions (i.e., related to their ability to segregate fruit, commitments to export markets, etc.). Check with your handler FIRST to confirm that they will be accepting fruit treated with quinclorac and under what conditions.

**Formulation and Surfactants.** You can use either formulation of the herbicide. Both can be chemigated or used with a ground rig. Aerial application is PROHIBITED. Use a non-ionic surfactant (NIS) at 0.25% v:v (with broadcast equipment) or 2-4 pt/A if chemigating. You can substitute a crop oil concentrate (COC) at the rate of 2 pt/A. Some COC can cause vine injury, so use one that you have experience with or check with your ag supplier for information. You can spot-treat with QuinStar, if desired.

**Maximum AI Allowed.** Irrespective of the formulation used, you cannot exceed 0.5 lb active ingredient per acre in a season. The maximum limit is 16 oz/A of the 4L OR 10 oz/A of the 75DF. Technically, 0.5 lb ai would be 10.67 oz of the 75DF, but the label permits the use of a maximum of 10 oz/A. Although the label permits a single application of 12.5 oz of the 4L or 8 oz of the 75DF, you should be able to get good control using just 8 oz (4L) and 5 oz (DF). The high label rate was introduced in our first year of use, when the permit came late. In that year (2009), we had failures and thought a higher rate might help. As it turns out, it’s the timing that is critical.

**Timing.** QuinStar should give good control of dodder providing it is applied PRE to early POST for the first application. Scout for dodder seedlings as you would for a Casoron application. When you see multiple seedlings (1” or greater), plan to make your application within the next 4 - 7 days. Certainly, make your first application of QuinStar before dodder is well established on a host. If you need to err one way or the other, err on being TOO EARLY rather than too late. You must allow at least 30 days between applications and you may make a maximum of TWO applications per season.

**Can I Mix Callisto and QuinStar?** Some growers may be considering combining Callisto and QuinStar. I have not had any first-hand experience with this mixture, but my colleague, Jack Perry from WI, reports the following. The formulations seem to work well together. Using both at the full rates is expensive and may not give the payback in dodder control to justify the expense. If looking to control dodder with QuinStar (permitted with the Section 18) and other weeds with Callisto, they seem to make a good match. Again, timing seems to be the key for control rather than mixing or using multiple herbicides. Using a surfactant in the mixture is a must for any POST application. Callisto does not require surfactants when used PRE, but the QuinStar label does recommend their use.

**Reporting forms.** If you use QuinStar, you must submit a Use Report to MDAR. The forms, available at the station or from Ag suppliers, are due November 30, 2011.
REDUCING MANAGEMENT COSTS IN CRANBERRY

In years when fruit prices are low, you may be looking for ways to trim your costs. Below are some thoughts compiled during the economic downturn in 1999-2000. The guidelines below must be integrated into your management plan based on your farm goals, available labor, and debt load. Large farms could be divided into 3 categories: 1) those remaining at full activity; 2) those managed with low-cost options, and 3) those managed for no crop.

Irrigation. It is hard to decrease irrigation use in cranberry; the best thing to do is increase efficiency. Make sure your pump is functioning well. Clean and inspect all the parts and check all parts of the irrigation system for leaks. Make sure your heads and nozzles are in good shape and straighten the risers. Maintaining the water table beneath the bed (sub-irrigation) can help to reduce the need for sprinkler irrigation. With this, make sure the bed is moist, but not saturated.

Fertilizers. Remember that much of the effect of fertilizer applied in the current year will be on the crop for the following 2 years. Avoid micronutrients unless you can document the need. Don’t use Sul-Po-Mag unless vines are stressed or vines show low K or Mg. 100 lb/A should be enough. Keep up with your NPK; apply enough to support the plant and fruit (if producing yields). Don’t sacrifice quality for price when purchasing fertilizers. Blended products with varied particle size will sort during application and produce uneven response. Avoid nitrate fertilizers.

Insect Management. The key to low-cost and effective insect management is monitoring by inspection and sweeping. Missed or uncontrolled outbreaks may lead to persistent problems, particularly with cranberry fruitworm. Black-headed fireworm may become an increasing problem on low-cost managed bogs. The pests to be concerned about are cranberry fruitworm, Sparganothis fruitworm, cranberry weevil, cutworms and soil insects. Sweep and inspect!! Pay attention to weak areas.

Disease Management. In most cases, the main diseases you will need to manage will be fruit rot and Phytophthora. Fruit rot, like Spag and cranberry fruitworm, directly impact the fruit. Make sure the canopy is well-managed (prune, if needed), remove trash after harvest and use good irrigation practices. When deciding about fungicide use, consider the history of fruit rot on your bog and the Keeping Quality Forecast. If you are minimally managing a bed, you will still want to protect against fruit rot to avoid the build up of inoculum. Otherwise, in 2 or 3 years, you could have real problems.

Weed Management. Manage Priority 1 weeds if possible. These include dodder, dewberry, sawbrier, and poison ivy. Most other weeds, you can live with (for a few years) until the price improves. You cannot let up on weed management for long. If the weeds get ahead of you, you will always be playing catch-up. Prioritize your weed problems and be as efficient as possible with your weed management options during this time. Chemigate your herbicides whenever possible.

Managing for crop elimination. Flooding during bloom is a proven method to eliminate crop. You could try to minimize your bog’s flowering potential by allowing the bog to be exposed to cold temperatures in the spring (now). Exposure to temperature below the tolerance should injure flower buds and decrease flowering. Time the flood for when pinheads are out. At this point, most flowers will have opened. Pods will survive the flood, so don’t flood too early. Hold a deep flood for about 5 days. If the water is warm and the flood shallow, 2-3 days should suffice, however, longer deeper floods are preferable. Low oxygen levels (<3 ppm) may be possible in warm floods and vine injury can occur. Some growers have held for 7-8 days with good results.

Scout bogs destined for crop elimination. Be out there prior to the flood and control fireworms. If no spring outbreaks occur, you should be able to manage crop-
detract bogs with no insecticide applications. Use 1 fungicide to minimize inoculum build-up. Maintain good drainage. Dodder could be controlled by the bloom flood. You can also spend time wiping some problem weeds with glyphosate since you will not need to heed the 30-day PHI. Target your applications for late in the season (September - October or when we have nice sunny days followed by cool nights).

If the bloom flood was not totally effective, remove any produced fruit prior to the next season. Leaving the fruit on the bog provides a great source of inoculum for fruit rot fungi and may be a problem the next time you harvest the bog.

**Mowing the bog.** You may want to consider mowing your bog (now is the time to do that). The new growth is vegetative and next year’s crop may also be reduced a bit in some situations. Insect pressure is less on mowed bogs, but you should still keep an eye out. Apply fertilizer to encourage re-growth and bud production.

**Property Tax Issues.** It is crucial that your operation not become classified as an abandoned bog. Continuing normal agricultural activities should suffice to keep your agricultural status. A property must generate some gross income to qualify for Chapter 61A. Contact CCCGA or MA Farm Bureau for more information.

This information was taken from our “Reducing Management Costs” fact sheet that can be found on our web site at [http://www.umass.edu/cranberry/downloads/Reducing%20cost.pdf](http://www.umass.edu/cranberry/downloads/Reducing%20cost.pdf).

If you have any experience that could improve our recommendations during tough economic times, please let us know.

**Cranberry Station Staff**

**WINTER MOTH UPDATE**

Winter moth larvae have definitely hatched in our area. Nearly every blueberry bud at State Bog has a tiny 1 - 2 mm caterpillar in it. However, we expect that cranberry is colder and we will not be able to detect winter moth on the bogs for another week or two. If there is a warm sunny day in the next 2 weeks, it is advisable to sweep and see if we can find any larvae. If you have a history of winter moth on your bog, it would be wise to get ready to apply Delegate, Avaunt, or Intrepid for this year’s damaging spanworms.

Winter Moth Update from UMass Extension Landscape Message #8 on April 22, 2011 (comes out every Friday) [http://www.umassgreeninfo.org/landscape_message/landscape_message.html](http://www.umassgreeninfo.org/landscape_message/landscape_message.html)

Cape Reports: Winter moth caterpillar was found inside blueberry buds in Sandwich; eggs of this pest hatch between 20-50 GDD. Monitor expanding foliage for the free-feeding stage, which is most vulnerable to sprays.

SE MA report, Hanson: Winter Moth (WM) eggs began hatching in MA on April 10th as reported by Deborah Swanson in Hanson, MA (Plymouth County). Heather Faubert reported that WM egg-hatch began in RI on April 11th. New WM larvae seek and wriggle into swelling buds of the host plant and can be found there now. New larvae within buds are light in color and only about 1 mm in length. Once larvae are within the buds, there are no known controls until the buds open and the caterpillars become free-feeders.

The cool weather has slowed development of oak tree buds and they appear too tight for winter moth at this time. Winter moth caterpillars were found in Japanese maple and Norway buds. The cool weather has also slowed winter moth development. Based on winter moth flight last fall, UMass Entomologist, Dr. Joe Elkinton, does not expect to see high numbers of winter moth caterpillars this spring. Overall, he thinks that densities will be down this year due to the marked decline that began last year. That being said, there may be a few areas with high densities, so continue to monitor developing buds on susceptible plants (oak, birch, maple, blueberry, apple, crabapple, etc.) with a history of winter moth damage and manage early to minimize damage.

Buds have been slow to open this spring since winter moth eggs hatched and spot-checking in regions of MA that experienced high winter moth populations last year has shown as many as 3-5 caterpillars per bud. Prolonged cool weather could result in the loss of flowers and foliage prior to bud-opening in these areas. Last year, 75,000 acres in Eastern Massachusetts were defoliated by winter moth caterpillars. Those areas that were most affected may very well experience equal or potentially worse damage this year. Winter moth is an especially difficult insect to predict in MA and how it will behave here is still not yet fully understood given that it is a recent exotic invader to our state. Dr. Joe Elkinton at UMass Amherst continues with his studies of this pest and its population dynamics.
IPM MESSAGE NOW ACTIVATED

Due to issues with winter moth and other concerns, I have started the IPM Message in mid-April (both 2010 and 2011). You can access the weekly updates on our web site http://www.umass.edu/cranberry/cropinfo/ipmmessage.html or by calling the station, ext. 60. I typically update on Fridays. If my schedule interrupts that pattern or if a pest situation requires a non-Friday update, I will always indicate when the message was last updated.

If you have any issues you would like addressed, please let Hilary Sandler know, ext. 21.

Carolyn DeMoranville, Station Director

WORKER PROTECTION TRAININGS
Cranberry Station Library  2-4 PM

Worker Protection Trainings for cranberry workers in the handler category will be offered in 2011: April 27, May 25, and June 29. There is a $5 fee to cover the cost of the WPS training manual. If you have a pesticide license, you do not need this training.

Contact Martha Sylvia: 508-295-2212, ext. 20 to sign up or for additional information.